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FACULTAD DE CIENCIAS SOCIALES

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CLASS SYSTEM USING THE IPA TO IMPROVE PHONEMES (/ŋ/, //) IN ENGLISH

VICENTE GIRON NATHALY SILVANA
LICENCIADA EN PEDAGOGIA DEL IDIOMA INGLES

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SARMIENTO CHUGCHO KLEBER OSWALDO

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DEDICATION

<div align="right">**Mayely Angeline Cedillo Suconota**</div>

To God, for being my support in this journey. To my parents, especially my mother, for not letting go of my hand and for being my driving force every day. To my best friend, for accompanying me in this process and always supporting me. To my sisters, for bringing a smile to my face on difficult days.

<div align="right">**Nathaly Silvana Vicente Girón**</div>

To God, for being my guide, my refuge, and for never letting go of my hand in times of adversity. To my parents, for the unconditional love, sacrifices, and support at every step in helping me achieve my goals. To my siblings, for their companionship, affection, and the laughter they brought me even on the hardest days. To my family and friends, for their kind gestures and encouraging words. This achievement is also yours.

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Mayely Angeline Cedillo Suconota

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RESUMEN

La presente investigación tiene como objetivo mejorar la pronunciación de los fonemas /n/, /ŋ/ del inglés en los estudiantes de 7mo grado de Educación General Básica paralelo "A" de la unidad educativa NN, durante el periodo lectivo 2025-2026, mediante la implementación de un sistema de clases basado en el uso del Alfabeto Fonético Internacional (IPA). El estudio se enmarca en la problemática existente dentro del sistema educativo ecuatoriano, donde la enseñanza del inglés suele centrarse en aspectos gramaticales, descuidando el desarrollo fonético y oral, lo cual repercute directamente en la inteligibilidad y competencia comunicativa de los estudiantes.

La tesis parte del reconocimiento de que la pronunciación es una habilidad esencial en el aprendizaje del inglés como lengua extranjera, y que existen limitaciones significativas en el contexto educativo ecuatoriano, tales como la enseñanza tradicional, la escasa instrucción fonética y la falta de recursos didácticos. A través de un enfoque metodológico cuantitativo y un diseño de tipo transversal-descriptivo, se aplicaron instrumentos como pruebas diagnósticas, entrevistas y observación para identificar las dificultades de pronunciación en los estudiantes.

Los resultados evidencian un bajo desarrollo de la competencia fonética, especialmente en la articulación y reconocimiento auditivo de los fonemas /n/, /ŋ/. A partir de este diagnóstico, se diseñó e implemento un sistema de clases que integra teoría y práctica fonética con el apoyo del IPA, orientando a fortalecer la conciencia articulatoria y auditiva, y promover una pronunciación más precisa y comunicativa.

La propuesta demuestra que el uso del IPA como recurso didáctico innovador es efectivo para mejorar la pronunciación en inglés, y se plantea como una herramienta viable para ser aplicada en otros contextos educativos similares, contribuyendo así a la mejora del proceso de enseñanza-aprendizaje del idioma.

Palabras clave: pronunciación, fonemas /n/ y /ŋ/, Alfabeto fonético Internacional (IPA), sistema de clases, Educación General Básica.

ABSTRACT

This research aims to improve the pronunciation of the English phonemes /n/ and /ŋ/ in students of 7th grade, class "A", at NA school General Basic Education during the 2025–2026 academic year, through the implementation of a class system based on the use of the International Phonetic Alphabet (IPA). The study is framed within the existing problems in the Ecuadorian education system, where the teaching of English tends to focus on grammatical aspects, neglecting phonetic and oral development, which has a direct impact on the intelligibility and communicative competence of students.

The study recognizes pronunciation as a crucial skill in learning English as a foreign language and identifies persistent challenges in the Ecuadorian educational context, including traditional teaching approaches, limited phonetic instruction, and a lack of dynamic didactic resources. Applying a quantitative, non-experimental, cross-sectional, and descriptive methodology, diagnostic evaluations, interviews, and classroom observations were conducted to assess students' pronunciation level.

The results revealed considerable difficulties in articulating and recognizing the target phonemes. In response, a phonetics-based class system using the IPA was developed and implemented to strengthen both articulatory and auditory awareness, and to improve oral communication skills.

The findings demonstrate that incorporating the IPA as a didactic resorce is effective in enhancing students' pronunciation. This proposal serves as a replicable educational model to improve English pronunciation through innovative and structured teaching strategies.

Table of Contents

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

The importance of English in the contemporary world is evident in a wide range of disciplines, as its mastery has become an indispensable skill in both the professional and personal spheres. The language has transcended its geographical boundaries to establish itself as the lingua franca in international communication, spanning sectors as diverse as business, science, technology, aviation and diplomacy. One of the fundamental reasons for its relevance is its role as the predominant language on the Internet and in most academic and scientific publications. With more than 50% of the content on the web written in English, access to this language provides a vast amount of information and knowledge that would otherwise be inaccessible.

In the educational context, English takes on an even more critical dimension. Educational institutions around the world have recognised the need to integrate English language teaching into their curricula to prepare students for a globalised future. The focus is not only on the teaching of the language as such, but also on its application in diverse areas of knowledge and the development of critical skills for the 21st century. This involves not only learning to communicate in English but also using it as a resource for accessing international educational resources, participating in academic exchanges and collaborating in global research. David Graddol highlights this reality, pointing out that "monoglot English graduates face a bleak economic future as qualified multilingual youngsters from other countries are proving to have a competitive advantage over their British counterparts in global companies and organisations". (Graddol, 2006), p. 8.

Improving English language teaching in the education system is crucial in the current context of globalisation. Despite the efforts made, there are still significant challenges that need to be overcome to ensure that students develop effective language

skills in English. For (Mendoza-Bozada, Ojeda & Carrión, 2022), p.47 "the scarcity of technology and the lack of maintenance have a negative impact on the quality of education, generating demotivation in both students and teachers". This lacks limits learning opportunities and has a negative impact on the quality of English language education. In this sense, there are several problems that lead to an insufficient level of English among students, such as the poor English pronunciation of foreign language learners.

Pronunciation is an essential skill in the process of learning a language, and its development is vital for effective communication. In this sense, phonetics is presented as a determining factor that has a direct impact on the mastery and accuracy of pronunciation in foreign language learners. In order to know the impact that phonetics has had on the development of pronunciation in students, we must investigate its historical review, which marks a path of evolution and understanding in this area of study. As Romero and Vásquez (2023) emphasize, the development of oral skills in second language learners should begin with explicit and structured phonetic instruction. They argue that effective pronunciation teaching relies on teachers being adequately trained in phonetics, and that students benefit significantly from early exposure to phonetic principles in order to build accurate and lasting speech patterns.R

This historical approach makes it clear that the teaching of phonics, from its origins in the late 19th century, has been instrumental in promoting more accurate and effective pronunciation.

According to Li (2024), phonetic knowledge is key to the acquisition of sounds in a second language, as it provides the necessary basis for identifying and reproducing speech sounds from the earliest stages of learning. The ability to express oneself

through speech and sounds is an essential aspect of human nature. Since primitive times, human beings have used sounds as a means of conveying thoughts, needs and emotions, and phonetics emerges as an analysis of this communicative capacity.

The use of the International Phonetic Alphabet (IPA) as a methodological resource in teaching English as a foreign language has proven to be of great value. Its application facilitates the process of learning and improving pronunciation, as well as listening comprehension and the acquisition of a more authentic accent. The incorporation of IPA in the context of English language teaching enables educators to effectively address the challenges learners face when dealing with a phonological system different from that of their mother tongue. As Setiyono (2019) points out, "the use of IPA by combining it using various teaching method can help the students in learning pronunciation… IPA is needed and very beneficial in learning pronunciation" p. 25.

In the Ecuadorian context, the study of phonetics and its link with the development of pronunciation in students has experienced significant growth in recent decades. Ecuador, like many other countries, is in a globalised world where the mastery of foreign languages is increasingly indispensable to access educational and employment opportunities or to participate in the international community.

(Chust-Pérez et al., 2025) point out that "historically, reading and writing have been prioritised over speaking, limiting opportunities for authentic classroom interaction. This imbalance is reinforced by lack of time, large groups and methodological gaps" (p. 118).

This is because the Ministry of Education of Ecuador (MinEduc) has introduced various initiatives aimed at enhancing the process of teaching and learning English in educational institutions.

However, the English language situation in Ecuador also poses several challenges that raise concerns in both the educational and employment spheres. Even though English is widely recognised as a fundamental skill for global communication and for accessing educational and professional opportunities, the level of English proficiency among Ecuadorians remains variable and, on many occasions, unsatisfactory. Under this premise and with the aim of improving this situation, it has been estimated to diagnose the current situation of the students of General Basic Education in relation to the command of English and after that, to apply the IPA in the classroom in order to improve the pronunciation in English of the aforementioned students.

The following situations were observed in the 7th grade of General Basic Education "A" at NA school:

- Teachers do not focus on phonetics teaching.

- Poor pronunciation of phonemes (/n/, /ŋ/) in students.

- Shortage in the use of teaching methods in general and in pronunciation specifically.

- Shortage of dynamic teaching resources.

Because of the nature of the external factors, the following **scientific problem** is proposed:

How to improve the pronunciation of the English phonemes (/n/, /ŋ/) in the students of General Basic Education (EGB) and specifically in the 7th grade of General Basic Education "A" at NA school in the 2025-2026 school year?

Considering the **object of the study** the teaching-learning process of the English language in students of the 7th grade of General Basic Education "A"

Possible causes of the problem include the following:

- Teachers continue to apply traditional teaching.

- Insufficient language transfer from L1 to L2 for learners.

- Lack of innovative methods for teaching phonetics such as I.P.A (International Phonetic Alphabet).

- Lack of teaching resources for pronunciation teaching.

The **general objective** of the research is the following:

To improve the pronunciation of the English phonemes (/n/, /ŋ/) in the students of General Basic Education (EGB) and specifically in the 7th grade of General Basic Education "A" at NA school during the academic period 2025-2026 through the implementation of a system of classes with the use of the I.P.A.

This objective is delimited in the **field of action**, the didactic resources for the teaching of pronunciation.

The **specific objectives** of this research project are as follows:

- To establish a theoretical foundation for the use of teaching resources in the English teaching-learning process, focusing on the pronunciation of phonemes (/n/, /ŋ/).

- To identify the main difficulties in the pronunciation of the phonemes (/n/, /ŋ/) of English of the students of EGB, at NA school during the academic period 2025-2026.

- To design a system of lessons with the use of the International Phonetic Alphabet (I.P.A.) for the improvement of the pronunciation of the phonemes (/n/, /ŋ/) of English in EGB students at the NA school during the academic period 2025-2026.

- To evaluate the progress in the pronunciation of English phonemes (/n/, /ŋ/) of GBS students at the NA school during the academic period 2025-2026, after the implementation of the class system with the use of the International Phonetic Alphabet (I.P.A.) throughout the academic period.

It is developed based on the following **scientific hypothesis**:

If a system of classes is implemented with the use of the I.P.A as a didactic resource, then, the pronunciation of the phonemes (/n/, /ŋ/) of English in the students of 7th grade of General Basic Education "A" at the NA school during the academic period 2025-2026 will be improved.

Based on the hypothesis, the relationship between two variables is studied:

The **independent variable** is the class system with the use of IPA.

The **dependent variable** is the pronunciation of phonemes (/n/, /ŋ/) in learners which is defined as: the way in which the sounds of a language are articulated and emitted when spoken.

This scientific research is carried out from a quantitative methodological paradigm and has a non-experimental design of a transversal-descriptive type. The

population is made up of students of General Basic Education at the NA school during the academic period 2025-2026.

Therefore, theoretical methods such as historical-logical, hypothetical-deductive and analytical-synthetic methods are used. In addition, empirical methods such as observation, diagnostic assessment and interview are applied. These will be explained in detail in the methodological framework.

The **importance** of the research lies in the use of the I.P.A. as a didactic resource to improve the pronunciation of phonemes (/n/, /ŋ//), through a system of lessons, to increase the mastery of the target language through innovative teaching methods.

The **practical contribution** of this research reflects a class system focused on the use of the I.P.A. as a didactic resource to improve the pronunciation of the phonemes (/n/, /ŋ//), so that students identify and produce sounds correctly.

CHAPTER I: THEORETICAL FOUNDATION OF THE ENGLISH TEACHING-LEARNING PROCESS AND TEACHING METHODS ABOUT THE DEVELOPMENT OF COMMUNICATIVE SKILLS

This chapter provides the theoretical bases on the use of the I.P.A (International Phonetic Alphabet) as a didactic resource in the teaching-learning process of the English language in order to improve the pronunciation of the phonemes (/n/, /ŋ/) in students, based on three categories that cover the historical evolution and the theoretical characterisation of the field and the objective of the research, this research is based on previous studies, considering the perspectives of various authors to support the arguments put forward. Finally, the contextual characteristics of the previously mentioned process of the English language in General Basic Education (EGB) are presented, as well as the diagnosis in the improvement of the pronunciation of the phonemes (/n/, /ŋ/) in the students who are part of the sample.

1.1 Theoretical Basis of English Pronunciation

English language teaching has undergone a remarkable transformation over time, moving from traditional approaches focused on the memorisation of grammatical rules and literal translation, to methodologies that privilege effective communication and the comprehensive development of communicative skills.

As one of the studies on CL highlights;

Before the emergence of Communicative Language Teaching (CLT) in the 1970s, English language instruction was dominated by structuralism methods...However, the lack of attention to the functional and social aspects of language eventually led to growing dissatisfaction...paving the way for the communicative movement n.p.

This clearly evidences the shift from a focus on form to one that values function and linguistic interaction in real contexts.

This evolutionary process reflects the changing educational perspectives and social needs of the time, to develop the necessary knowledge and increase learners' interest. The teaching of pronunciation has been a crucial part of the second language (L2) learning process. Over the years, different methodological approaches have emerged, each with its own theories and practices. The following are the most significant historical stages that have marked this transition.

Grammar-Translation Method

This method was widely documented and practised from the mid-19th to the early 20th century. Antonio Bergnes de las Casas, in works such as Novísima gramática inglesa (1864), applied Ollendorff's method, focusing on the memorisation of rules and literal translation, demonstrating the presence of this approach in the teaching of English. According to Piantaggini (2020), the grammatical translation method still prioritises the memorisation of structural rules and the translation of literary texts, relegating oral and communicative skills to second place, which shows that traditional pedagogies persist in modern second language teaching.

Characteristics:

- Focus on reading and writing.

- Translation of texts from English into the mother tongue and vice versa.

- Rote learning of grammatical rules and vocabulary.

- Little or no emphasis on oral communication.

- Communicative Development: Limited, as oral production and comprehension were not a priority.

Direct Method

This approach was advocated by Wilhelm Viëtor and other 19th century reformers, who promoted teaching without translation and with an emphasis on inductive language use in everyday situations. Recent research agrees that the Direct Method promotes mother tongue-like learning, prioritising oral interaction, minimising translation and avoiding explicit grammatical analysis. In that sense, Teachers Institute (2023) states that this approach "encourages active participation, improves fluency and strengthens pronunciation skills by inducing spontaneous use of the language".

Characteristics:

- Teaching exclusively in English, without recourse to the mother tongue.
- Use of conversation, demonstrations and objects to teach vocabulary and phrases.
- Emphasis on correct pronunciation and oral practice.
- Grammar and vocabulary learned inductively, not explicitly.
- Communicative Development: High, as the focus was on spontaneous oral communication.

Audiolingual Method

Behaviourist approaches to language teaching, which emerged during World War II in the United States, continued to influence later methods such as audio-lingual or Situational Language Teaching. These methods are based on intensive repetition, operant conditioning and language habit formation. Widiarini (2022) points out that, although they derive from figures such as Bloomfield, their foundation still lies in behaviourist principles: stimulus, response, reinforcement and immediate correction.

However, he also admits that this orientation has been criticised for its limited communicative spontaneity and excessive focus on form rather than actual language use.

Characteristics:

- Use of dialogues and repetitive patterns to form linguistic habits.

- Focus on pronunciation and grammatical structure.

- Intensive practice through repetition of model sentences.

- Little room for creativity and spontaneous communication.

- Communicative Development: Limited to structured repetition of sentences, with little improvisation.

Communicative and Task-Based Approach

Nunan (1989) argued that authentic tasks focus primarily on meaning rather than form, allowing learners to apply language skills in real contexts. This has been supported in recent meta-analyses: Boers and Faez (2023) conclude that TBLT programmes improve fluency and functional comprehension, as they prioritise meaningful language use over formal analysis of structures.

Characteristics:

- Introduction of vocabulary and structures in specific contexts (shopping, travel, etc.).

- Emphasis on the use of language in real-life situations.

- Use of visual materials and practical examples to teach vocabulary and grammar.

- Communicative Development: Moderate, focusing on specific, repetitive situations.

Natural Approach

In a recent review, Xiao (2025) describes how the Natural Approach continues to promote language acquisition through comprehensible input, which is just above the learner's level, in low-anxiety environments. The article confirms that this approach remains valid and widely used in language education, noting that 'progressive comprehension of input in relaxed contexts promotes spontaneous language acquisition' (p. 101).

Characteristics:

- Emphasis on authentic communication and practical language use.

- Communicative activities such as role-plays, debates, interviews and pair work.

- Grammar and vocabulary taught in communicative contexts, not in isolation.

- Use of English in real-life situations, prioritising fluency over grammatical accuracy.

- Communicative Development: Very high, as students were expected to be able to interact effectively in different contexts.

CLIL (Content and Language Integrated Learning) and Use of Digital Technologies

This approach was documented by David Marsh (1994), who coined the term CLIL to describe a pedagogical perspective based on using a foreign language as a medium for teaching academic content. With the advance of technology, Garrison and

Vaughan (2008) explored blended learning, defining it as "the thoughtful fusion of face-to-face oral communication and online written communication are optimally integrated such that the strengths of each are blended into a unique learning experience congruent with the context and intended educational purpose." (p. 5)

Characteristics:

- Use of academic content to teach English, simultaneously developing language skills and subject knowledge.

- Focus on communicative competence in academic and professional contexts.

- Authentic materials relevant to the specific subject.

- Development of all communication skills (listening, speaking, reading and writing) in specific contexts.

- Communicative Development: High, as the language is used in real and academic contexts, favouring communication in professional and educational environments.

The evolution of methodological approaches to pronunciation teaching has increasingly recognised the complexity of second language learning. In recent years, the importance of strategies that integrate communicative, contextual and personalised elements to support phonological development has been highlighted. According to Pennington and Rogerson-Revell (2019), current methods for teaching pronunciation should combine the communicative approach with explicit practices of sound perception and production, tailored to the individual needs of learners.

According to Bravo and Alves (2020), CRADLE (Curriculum Reform and Development for the Learning of English), launched in 1992 with the support of the

British Council and the Ecuadorian Ministry of Education, was a key milestone in introducing contextualised materials - such as the Our World Through English series - that incorporated Ecuadorian cultural content and promoted a comprehensive communicative approach to the language. Subsequently, with the incorporation of English as a compulsory subject in the Ecuadorian education system, the global importance of the language was further emphasised (Ministry of Education of Ecuador, 2016, p. 3).

Given the relevance of English in the Ecuadorian education system, many educators have focused their efforts on evaluating, questioning and proposing new pedagogical strategies. However, structural challenges continue to be identified, such as excessive class sizes, poor in-service teacher training and inconsistent application of international standards. According to Quesada-Vázquez (2024), these factors limit the effectiveness of language policies and reduce the quality of English language learning, especially in public institutions with limited resources. Recognising that teachers are considered guides to knowledge, it is essential that they identify the most effective methods for their classes.

The transition towards innovative approaches, such as ICT-mediated learning and the CLIL approach, represents an effective way to foster learner autonomy, active collaboration and meaningful integration of content in English. According to Fernández-López and García-Segura (2024), the combination of educational technologies with methodologies such as CLIL allows for the design of more inclusive and motivating learning environments, facilitating the development of language and academic skills simultaneously.

1.2 Conceptual Characteristics of Language Teaching Methods in Relation to the Development of Communicative Skills

The study of language teaching methods has been a dynamic field, evolving in response to the changing needs of learners and developments in pedagogical theory and practice. Each method has provided specific approaches to the development of communicative skills, which are central to foreign language learning. The main aim of this section is to analyse the theoretical basis for the use of phonetics as a methodological strategy in the English language teaching-learning process for the development of pronunciation.

1.2.1 The Teaching-Learning Process of English in General Basic Education

The evolution of the English language teaching-learning process in General Basic Education (EGB) in Ecuador reflects a curricular transformation that emphasises key elements such as the role of the teacher, active student participation, curricular content, teaching methods, didactic resources and continuous assessment. According to the Ministry of Education, the curricular proposal for students in grades 2-10 of EGB is designed to "respond to the needs of the Ecuadorian reality' and recognises 'varying degrees of bilingualism in the communities'. It also states that 'the elements of the educational curriculum are essential factors ... expressed in each of the educational plans".

Pan (2023) argues that, within teacher learning communities, the shift from traditional to learner-centred instruction promotes an active role of the learner as the protagonist of the educational process, while the teacher becomes a guide and facilitator, fostering learner autonomy and participation. This reinforces your idea of a dynamic space in which the teacher guides pedagogical strategies oriented to the

development of linguistic competences, adapted to the age, cognitive level and needs of the group.

The teaching of English in EGB should start from the learner's prior knowledge and promote a playful, communicative and inclusive approach. Navarro Ramírez and Piñeiro Ruiz (2014) argue that this process involves an effort on the part of the learner to reorganise his or her mental schemas according to the principles of the new language, especially when there are notable differences between the mother tongue and the foreign language. This represents a challenge for EGB learners, who are at a crucial formative stage for the development of phonological, aural and articulatory skills.

The Ministry of Education of Ecuador (Mineduc, 2016) establishes that the process of teaching English must be aligned with the Common European Framework of Reference for Languages (CEFR), promoting that by the end of Basic Education, students achieve level A2. Likewise, the national curriculum incorporates the communicative approach as a methodological axis, which implies the use of the language in real and meaningful contexts for students. It also includes the CLIL (Content and Language Integrated Learning) model, which seeks to link the learning of English with other areas of knowledge in an integrated way.

In this context, the teaching of phonetics in primary school is of great importance, since good pronunciation from the earliest levels favours listening comprehension and oral expression, the pillars of communicative learning. The lack of a phonetic approach in the classroom, together with the limited use of English outside the school environment, is one of the main difficulties observed in Ecuadorian education.

In summary, the teaching-learning process of English in General Basic Education should take place in a stimulating environment adapted to the characteristics

of the school group. Pedagogical planning must incorporate innovative teaching resources and phonetic strategies such as the use of the International Phonetic Alphabet (IPA), to strengthen students' communicative skills from an early age and contribute to a solid foundation in language proficiency.

1.2.2 The Use of Phonetics as a Methodological Strategy for Pronunciation in English

Methodological strategies focused on the teaching and learning of English as a foreign language have constantly evolved over time. This shift aims to optimize the acquisition of the new language through a variety of methods that promote practical use and the development of English.

Along the same lines, one of these methodological strategies is the use of the International Phonetic Alphabet (IPA), a standard resource used by linguists and educators to represent speech sounds accurately and consistently. Its use in English language teaching has proven to be an effective methodological strategy for developing students' pronunciation. As Kelly (2000) points out, "el IPA proporciona una representación clara y uniforme de los sonidos del inglés, lo que facilita a los estudiantes el aprendizaje de la correcta producción de dichos sonidos" (p. 14).

The IPA allows students to visualize and practice specific English sounds that may not exist in their native language. It also provides a reference system that students and teachers can use to systematically and consistently address and correct pronunciation problems.

Implementing IPA in the English teaching-learning process involves several methodological strategies. For example, phonetic transcription activities can be used

where students practice writing and reading IPA words. According to Murphy (2003), "las actividades de transcripción fonética ayudan a los estudiantes a desarrollar una comprensión más profunda de la relación entre los sonidos y sus representaciones gráficas" (p. 21).

Another strategy is integrating IPA into listening and repeating activities, where students listen to and repeat words and phrases spoken by native speakers, comparing their pronunciation with IPA transcriptions. This not only improves pronunciation accuracy but also increases students' confidence in speaking English.

1.2.3 Developing Pronunciation using IPA Phonetics in English

Phonetics and the use of IPA are essential components in teaching English as a foreign language. Using IPA, students can significantly improve their pronunciation, which in turn facilitates clearer and more effective communication. Implementing methodological strategies that incorporate IPA in the classroom can transform the learning process, providing students with the necessary resources to achieve accurate and fluent pronunciation. As noted in an article by McColleges (2024);

Pronunciation plays a crucial role in mastering the English language, impacting communication, comprehension, and overall language proficiency. For English language learners, achieving clear and accurate pronunciation is essential for effective communication in various contexts, including academic, professional, and social settings.

Therefore, mastering pronunciation contributes significantly to overall language proficiency, improving both interaction and speaker confidence.

The IPA was developed by the International Phonetic Association in the late 19th century to transcribe all the sounds of human speech (International Phonetic Association, 1999). According to Celce-Murcia, Brinton, and Goodwin (2010), its use in language classes helps students develop both receptive and productive pronunciation skills.

The International Phonetic Alphabet (IPA) is a fundamental resource in teaching pronunciation of English as a foreign language. Its standardized design allows for accurate representation of speech sounds, facilitating both transcription and learning of correct pronunciation. According to the International Phonetic Association (1999), "the IPA provides a standardized system for representing the sounds of speech, which is essential for accurate transcription and teaching of pronunciation". This standardization is vital for students to be able to correctly identify and reproduce English phonemes, which contributes to improving their communicative competence and achieving clear and understandable pronunciation.

The phonemes /ŋ/ (velar nasal) and /n/ (alveolar nasal) present specific challenges in language teaching, especially when learners don't have these sounds in their native language. The following dimensions are presented to help understand this situation:

Phonetic Dimension

Articulatory phonetics, supplemented with audiovisual support in the classroom, allows the movements and positions of the speech organs to be accurately described in order to produce specific sounds such as /n/ and /ŋ/. Li (2024) found that integrating videos illustrating tongue movements and articulatory anatomy significantly improves L2 perception and production, leading to more intuitive and effective learning.

/n/: Alveolar nasal consonant, produced by placing the tongue against the alveoli (just behind the upper teeth), allowing air to escape through the nose.

/ŋ/: Velar nasal consonant, produced by raising the back of the tongue against the soft palate.

Phonological Dimension

In English, the phonemes /n/ and /ŋ/ are contrastive and can change the meaning of words such as ban /bæn/ and bang /bæŋ/. In Spanish, on the other hand, /ŋ/ is a conditioning allophone of /n/, as in tengo [ˈteŋgo] or banco [ˈbaŋko]. Ghimenton & Lambelet (2021) show that teaching these phonological contrasts helps L2 learners develop more accurate phonological representations, thus improving their ability to perceive, produce and differentiate words with minimal phonetic difference, reducing lexemic confusion.

Auditory Dimension

Auditory perception is essential for distinguishing subtle differences between phonemes. Lee and Hwang (2025) show that a phonetic training programme that integrates high variability minimal pairs, together with auditory and visual activities, significantly improves phonemic discrimination and listening comprehension in learners of English as a foreign language. The results indicate markedly greater improvements in equivalent groups that received blended training versus controls.

Communicative Dimension

Accurate pronunciation not only enhances intelligibility, but also reinforces the speaker's confidence in communicative contexts. Quesada-Vázquez (2024) found that teachers surveyed perceive the teaching of pronunciation as a key factor in improving students' communicative ability, intelligibility and fluency, evidencing a positive impact on their confidence in speaking.

Therefore, the use of IPA phonetics in English teaching not only facilitates the learning of the sounds of the language but also promotes more accurate and fluent pronunciation, a fundamental aspect in the development of students' communicative competence.

1.3 Contextual characteristics of the English teaching-learning process in the 7th year of General Basic Education "A" at NA school

This section presents the contextual characteristics of the English language teaching-learning process in the General Basic Education system in Ecuador, with special emphasis on the phonetic diagnosis of the phonemes /n/ and /ŋ/ in 7th grade "A" students at the NA school. To this end, a non-experimental, descriptive, and cross-sectional research design was applied, using an observation guide, structured interviews, and diagnostic tests.

1.3.1 The English teaching-learning process in Ecuador

English language teaching has taken on an important role within the Ecuadorian education system, especially since the 2016 curriculum reform implemented by the Ministry of Education. This reform established English as a mandatory subject at the elementary and high school levels, with standards based on the Common European Framework of Reference for Languages (CEFR). Students are expected to achieve an

A2 level upon completion of elementary education and a B1 level upon completion of high school. Teachers, for their part, must demonstrate at least a B2 level to ensure quality teaching.

However, despite these policies, Ecuador continues to show low rates of English language proficiency. According to Alvarado and Méndez (2024), the country faces a significant lag in the acquisition of English as a foreign language, being ranked among the lowest levels of proficiency in Latin America. Among the main causes are identified as the use of traditional methodologies, the lack of systematic phonetic instruction and the scarcity of teaching resources adapted to local contexts.

In this context, school NA reflects a similar situation. Through preliminary observations carried out in 7th grade "A", it was identified that teachers do not prioritize the teaching of phonetics and that students present evident difficulties when articulating the phonemes /n/ and /ŋ/, probably due to interference from their native language and a lack of appropriate teaching strategies.

1.3.2 Diagnosis on the pronunciation of the phoneme's /n/ and /ŋ/ in 7th grade student's "A"

This section presents the results obtained from the diagnostic assessment administered to 7th grade "A" students regarding the pronunciation of the phonemes /n/ and /ŋ/. A rubric was used to assess four key dimensions: phonetics, phonology, auditory, and communicative.

1.3.2.1 Analysis of the results obtained through the application of the instruments

Indicator 1: Place and mode of articulation
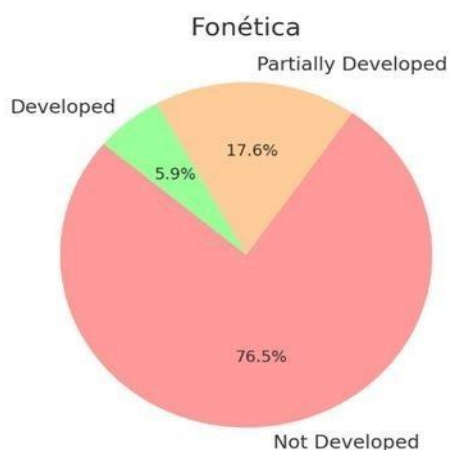
Figure 1: Pre-test (Place and mode of articulation)

Most students have significant difficulty identifying and producing the

phonemes /n/ and /ŋ/. This demonstrates a poor understanding of the places and modes

of articulation, as well as the use of the International Phonetic Alphabet (IPA). Practical

and visual articulation exercises are recommended.

Indicator 2: *Structure and Functioning of Sounds*
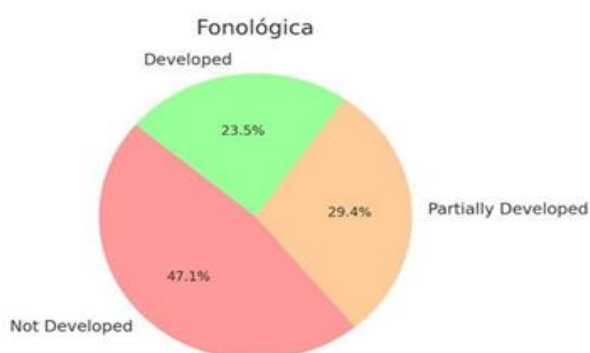
Figure 2: Pre-test (Structure and functioning of sounds)

Nearly half of the students fail to adequately distinguish sound structures or

basic phonological rules. However, a group with partial or complete understanding is

observed, which can be strengthened through recreational activities and phonological

analysis exercises.

Indicator 3: *Perceptual Distinction*
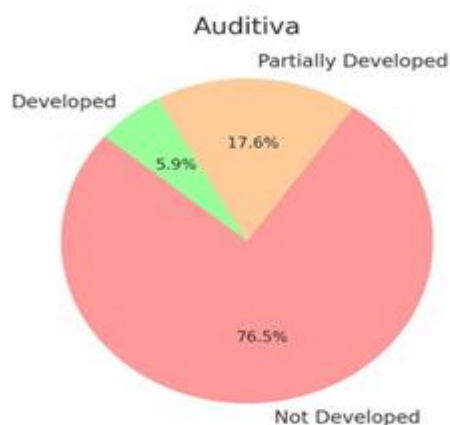
Figure 3: Pre-test (Perceptual distinction)

The results reflect serious difficulties in auditory discrimination between the

phonemes /n/ and /ŋ/, possibly due to a lack of specific auditory training. It is

recommended to include active listening activities, repetition, and sound comparison.

Indicator 4: *Intelligibility*
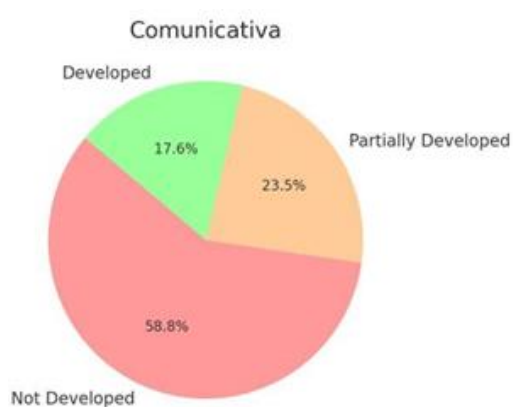
Figure 4: Pre-test (Intelligibility)

The results show that most students have difficulty clearly pronouncing the

phonemes /n/ and /ŋ/, which affects their intelligibility. Only 17.2% have adequately

developed this skill. It is recommended to reinforce oral production through phonetic strategies and communicative practices.

General Analysis

The data obtained from the observation guide, the diagnostic assessment, and the teacher interview show that the students' pronunciation level of the phoneme's /n/ and /ŋ/ is mostly at the "undeveloped" level. This overview highlights the urgent need to implement an innovative methodological proposal based on the International Phonetic Alphabet (IPA) to improve students' oral production.

CHAPTER II: METHODOLOGICAL FRAMEWORK

This chapter presents some aspects related to the methodology used in this research, as well as its components, including the type of study, the method used, the sources and techniques for data collection, among others.

2.1 Paradigm and type of investigation

The methodological paradigm is a set of principles and beliefs that guide the research process, guiding the selection of techniques and strategies to address a problem. According to Hernández, Fernández, and Baptista (2014), it is the conceptual framework that directs the collection, analysis, and interpretation of data, encompassing qualitative, quantitative, and mixed approaches.

The methodological paradigm of this research is quantitative, as it focuses on the collection and analysis of measurable data to evaluate the relationship between the IPA-based classroom system and the improvement in students' pronunciation of phonemes (/n/, /ŋ/). This approach allows for objective measurement of changes in pronunciation skills over the academic period. Furthermore, the quantitative paradigm is appropriate because it seeks to establish a cause-and-effect relationship between the variables of the scientific hypothesis.

The *quantitative paradigm* is justified for the following reasons:

Numerical data are collected through diagnostic assessments, interviews, and systematic observations.

A statistical analysis is performed to evaluate progress in phoneme pronunciation (/n/, /ŋ/) after implementing the class system.

The design allows for generalization of the results obtained across the study population.

Type of investigation

The type of investigation refers to the specific approach used to address the problem under study. According to Sampieri, Collado, and Lucio (2018), research types can be classified as exploratory, descriptive, correlational, and explanatory, depending on the objectives.

The study follows a non-experimental, cross-sectional descriptive design:

Non-experimental: Hernández, Fernández and Baptista (2014) explain that "en un diseño no experimental, las variables no se manipulan directamente, sino que se observan y analizan en su contexto natural". This applies to the study, as the data obtained from the class system based on the IPA are collected in a natural context.

Cross-sectional: Data collection is carried out during a single academic period (2025-2026), evaluating both the initial state and the results after the intervention.

Descriptive: The aim is to describe the characteristics and difficulties of pronunciation of phonemes (/n/, /ŋ/), as well as the effects of the class system on this skill in students.

This type of research is ideal for exploring specific pronunciation difficulties in a given group and assessing the effects of an educational intervention without significantly altering the school environment.

2.2 Population and sample

Lim (2024) defines a population in research as the total set of individuals or elements that share relevant characteristics for the study and from which conclusions can be generalized.

- *Population:* The population consists of all 7th grade students at NA school during the 2025-2026 academic year.

According to an analysis published in 2023, a representative sample is defined as a subset of the population whose estimator (e.g. mean, proportion or effect) can be generalised to the population as a whole, either in numerical estimation or in the interpretation of results. In this study, the 7th-grade group was intentionally selected due to its accessibility and the presence of pronunciation difficulties, justifying its choice.

- *Sample*

To select the sample, a non-probability purposive sampling method will be used, taking the specific 7th grade group "A" as a reference. This group will be chosen for the following reasons:

- It represents a significant educational unit at the EGB level.
- It presents evidence of difficulties in pronouncing phonemes (/n/, /ŋ/).
- It is an accessible group for implementing the class system and for monitoring progress.

The sample size will be determined by the total number of students enrolled in 7th grade "A." This approach will allow for a more detailed analysis focused on the needs of the group.

2.3 Research methods

Scientific research methods are essential for organizing, structuring, and validating the academic inquiry process. According to Sabino (2014), these methods allow for defining the appropriate path to achieve objectives and respond to the problems posed. In this research, theoretical and empirical methods are used to improve the pronunciation of phonemes (/n/, /ŋ/) in 7th grade students at the NA during the 2025-2026 period.

2.3.1 Theoretical Level Methods

Theoretical methods are fundamental tools for the conceptual analysis of the object of study and allow for the generation of new knowledge through the critical interpretation of existing information. Weng Marc Lim (2024) points out that qualitative research methods - particularly in phenomenological approaches - involve collaborative stages of reduction, reflection and refinement that promote deep researcher engagement with the data, enabling the discovery of essential meanings of the phenomenon under study.

Historical-Logical Method

The historical-logical method examines the evolution and transformation of a phenomenon over time, focusing on its structural and essential aspects. According to Martínez-Pineda and Rojas (2023), this approach facilitates the identification of patterns and principles that emerge throughout the development of educational and social processes. In this research, it was applied to analyse the evolution of phonetics teaching and its influence on learning English pronunciation.

- *Hypothetical-Deductive Method*

Romero and Vásquez (2023) describe the hypothetical-deductive method as a scientific process in which researchers formulate hypotheses based on existing theoretical frameworks and test them through structured data analysis. In this study, the hypothesis was proposed that the implementation of a class system using the IPA would significantly improve the pronunciation of the phonemes in the students.

- *Analytical-Synthetic Method*

The analytical-synthetic strategy involves breaking down the object of study to analyse it components and then integrating that information to obtain a comprehensive view. According to Bunge (2021), a thorough understanding of a phenomenon requires an analysis of both its individual parts and the complete whole, taking a systemic view that allows its components to be broken down without losing sight of how they interact with each other. In this study, this approach was used to examine the elements of the teaching-learning process and the application of the International Phonetic Alphabet (IPA), allowing for a detailed understanding of each component and its role within the education system.

2.3.2 Empirical Level Methods

Empirical methods provide direct and concrete information about the object of study, which contributes to the validation of hypotheses and the formulation of well-founded conclusions. For Sampieri, Collado, and Lucio (2014), empirical methods are essential in educational research for observing, measuring, and describing real-life phenomena.

The following empirical methods were used in this research:

- *Observation*

Scientific observation consists of the systematic and controlled recording of the manifestations of the phenomenon under study. According to Martínez-Pineda and Rojas (2023), observation in educational research is a key methodological tool that enables researchers to gather objective and contextualized data, providing a solid foundation for interpreting learning processes and classroom dynamics. Structured non-participant observation, supported by an observation guide (Appendix 1), was conducted both before and after the implementation of the class system.

- *Measurement*

Measurement involves assigning numerical values to observable characteristics, which makes it possible to quantify phenomena and facilitate their objective analysis. According to Martínez-Pineda and Rojas (2023), measurement in educational research is essential for establishing clear relationships between variables and accurately assessing the effects of an educational intervention. In this study, diagnostic assessment instruments were applied: a pre-test (Appendix 2) and a post-test (Appendix 3), assessed using a Likert-scale rubric that classified students' performance levels.

- *Interview*

According to Martínez-Pineda and Rojas (2023), the structured interview makes it possible to obtain reliable and comparable information by applying the same sequence of previously designed questions, which makes it a valuable tool for quantitative educational research. An interview was conducted with the teacher in charge before and after the intervention (Appendix 4) to obtain their perceptions of the students' pronunciation level and the effects of using the IPA on their learning process.

2.4. Data Processing Techniques

The data analysis for this research was carried out using techniques that allowed for the organization, interpretation, and evaluation of the information gathered throughout all phases of the study. These techniques helped identify the changes generated by the implementation of the class system based on the International Phonetic Alphabet (IPA) and allowed for an objective and systematic comparison of the results.

2.4.1 Data triangulation

This study used methodological triangulation as a tool to compare information obtained from various sources and instruments. This technique involves combining different data collection methods to strengthen the validity of the analysis. In this case, three main instruments were used: direct classroom observation, a diagnostic assessment administered to students, and a structured interview with the teacher in charge.

2.5 Working with the variable in the research study

Independent Variable (Variable 1): Corresponds to the implementation of a class system based on the International Phonetic Alphabet (IPA). This system includes a series of structured phonetic exercises, visual and auditory activities, and practical sessions focused on the precise articulation of the phonemes /n/ and /ŋ/. The methodological proposal seeks to strengthen students' phonological awareness using phonetic transcriptions, minimal pairs, and playful activities that integrate target sounds into real-life communicative contexts.

Dependent Variable (Variable 2): Refers to the improvement in students' pronunciation of the English phonemes /n/ and /ŋ/. This variable is understood as the

learners' ability to correctly identify, articulate, and use these phonemes in words, sentences, and communicative situations. Improvement is assessed through diagnostic tests (pre- and post-test), observation rubrics, and analysis of oral performance before and after the pedagogical intervention.

Table 1: Working with the phonemes variable

Problem	Concept	Dimensions	Indicators	Techniques	Instruments	Items
How to improve the pronunciation of the English phonemes (/n/, /ŋ/) in the students of General Basic Education (EGB) and specifically in the 7th grade of General Basic Education "A" at NA school in the 2025-2026 school year?	The phonemes (/n/, /ŋ/) are nasal sounds in the English language that present articulatory difficulties for native Spanish speakers.	Phonetic Dimension	Place and mode of articulation	Diagnostic test	Rubric	1. The student identifies the sounds (/n/, /ŋ/) by hearing them in different words. 2. The student correctly produces the phonemes sounds (/n/, /ŋ/) in isolation.
		Phonological Dimension	Structure and Functioning of Sounds	Observation	Observation guide	3. The student articulates the phonemes (/n/, /ŋ/) in complete sentences. 4. The student recognizes the IPA symbols corresponding to (/n/ and /ŋ/)
		Auditory Dimension	Perceptual Distinction			5. The student uses the IPA as a reference to improve his/her pronunciation.
		Communicative Dimension	Intelligibility	Interview	Questionnaire	6. The student demonstrates greater clarity when expressing themselves orally using these phonemes.

Table 2: Representation of the dimensions analysis

DIMENSIONS	ITEMS	ANALYSIS
Phonetic Dimension	1. The student identifies the points of articulation. 2. The student produces sounds using the correct manner of articulation. 3. The student applies the IPA technique to represent the phonemes (/n/, /ŋ/).	Three-level ordinal scale. **Totally developed:** (10-9) Correctly identifies and articulates (/n/, /ŋ/). **Partially developed:** (8-7) Articulates with average accuracy. **Undeveloped:** (≤6) Has difficulty articulating phonemes.
Phonological Dimension	1. The student recognizes the sound structure of phonemes. 2. The student understands basic phonological rules. 3. The student distinguishes the phonemes (/n/, /ŋ/) within words.	Three-level ordinal scale. **Totally developed:** (10-9) Understands sound structure. **Partially developed:** (8-7) Partially recognizes rules. **Undeveloped:** (≤6) Does not distinguish phonological structures.

Auditory Dimension	1. The student identifies the phonemes (/n/, /ŋ/) by ear. 2. The student discriminates between similar sounds. 3. The student matches what they hear with the corresponding phonetic symbol.	Three-level ordinal scale. **Totally developed:** (10-9) Clearly distinguish phonemes. **Partially developed:** (8-7) Recognizes in some contexts. **Undeveloped:** (≤6) Has auditory identification difficulties.
Communicative Dimension	1. The student expresses themselves clearly, using phonemes correctly. 2. The student's oral message is understandable. 3. The student maintains fluency when using words with (/n/, /ŋ/).	Three-level ordinal scale. **Totally developed:** (10-9) Clear and precise communication. **Partially developed:** (8-7) Partial comprehensibility. **Undeveloped:** (≤6) Has a lack of clarity in his/her speech.

2.6 Analysis data

For data analysis, a rubric based on the analysis category "development of the pronunciation of the phonemes /n/ and /ŋ/" was used, which is composed of phonetic indicators and a measurement scale.

Table 3: Rubric

Indicators	Totally developed (10-9)	Partially developed (8-7)	Undeveloped (-6)
Place and manner of articulation	The student correctly identifies and produces the phonemes /n/ and /ŋ/, mastering their point (alveolar and velar) and mode (nasal) of articulation.	The student partially recognizes the point and mode of articulation of the phonemes /n/ and /ŋ/ with some errors in production.	The student does not adequately identify or produce the point and mode of articulation of the phonemes /n/ and /ŋ/.
Structure and function of sounds	The student correctly understands and applies the phonetic structure of the sounds /n/ and /ŋ/ within words and sentences.	The student demonstrates partial understanding of the phonetic functioning of sounds, with some errors in their use.	The student is unaware of the structure and function of phonemes, making serious and frequent errors.
Perceptual distinction	The student accurately discriminates auditory between the phonemes /n/ and /ŋ/ in different contexts.	The student partially distinguishes the phonemes /n/ and /ŋ/ but is confused in some cases.	The student cannot audibly distinguish the phonemes /n/ and /ŋ/.
Intelligibility	The student produces the phonemes /n/ and /ŋ/ clearly, allowing for fluent and understandable oral communication.	The student presents acceptable pronunciation, but intelligibility is affected at certain times.	The student's pronunciation significantly affects the understanding of the oral message.

CHAPTER III: CLASS SYSTEM USING IPA FOR IMPROVING PHONEMES

(/n/, /ŋ/) IN ENGLISH

The purpose of this chapter is to provide the theoretical and didactic support for the intervention proposal, which consists of the application of a class system using the International Phonetic Alphabet (IPA) as a methodological strategy to improve the pronunciation of phonemes (/n/, /ŋ/) in 7th grade students of General Basic Education at NA school.

3.1 Theoretical foundation of the class system with the use of IPA to improve the pronunciation of phonemes (/n/, /ŋ/)

The teaching of English as a foreign language has evolved toward approaches that promote the development of communicative competence, within which pronunciation plays a key role. Phonetics, as a fundamental component, allows students to understand and reproduce the sounds of the target language more accurately. In this context, the use of the International Phonetic Alphabet (IPA) represents an effective resource for addressing the phonemes that are most difficult for Spanish-speaking students, such as the nasal phonemes /n/ and /ŋ/.

Authors such as Celce-Murcia, Brinton & Goodwin (2010) argue that the use of the IPA facilitates the articulatory and auditory learning of the sounds of English, contributing to clear and comprehensible pronunciation. According to Laver (1994), articulatory phonetics provides a technical framework for describing the production of phonemes such as /n/ (alveolar nasal) and /ŋ/ (velar nasal), which are frequently confused due to interference from the native language.

The design of a class system based on the use of the IPA allows structuring a pedagogical sequence that combines theoretical and practical activities. This system is

aligned with the communicative approach and the visual-auditory phonetic methodology, enabling students to develop the phonological awareness necessary to distinguish and produce phonemes correctly. According to Romero and Vasquez (2023), explicit pronunciation instruction based on IPA significantly improves fluency and communicative effectiveness by providing students with visual and auditory tools that reinforce conscious oral production.

In summary, a class system that incorporates the use of the IPA offers structured, contextualized, and adaptive methodology that promotes the progressive improvement of English pronunciation, especially for phonemes that are particularly challenging for native Spanish speakers.

3.2 Characteristics of the phonetic class system using the IPA

Phonics is a fundamental discipline in English language learning because it enables students to recognize, produce, and differentiate the language's sounds accurately. Correct pronunciation improves oral comprehension and strengthens confidence when communicating in academic and social contexts. The International Phonetic Alphabet (IPA) is a key resource in developing oral and listening skills.

The IPA is a universal system that uses specific symbols to represent speech sounds. This allows students to learn the correct pronunciation of words without relying solely on spelling. Implementing the IPA in the English classroom offers multiple benefits: it helps identify unfamiliar sounds, correct common pronunciation errors, and enables more conscious and systematic practice.

Based on the above, we propose a system of phonetic classes centred on the use of the International Phonetic Alphabet (IPA) for students of General Basic Education.

The system consists of four 40-minute sessions in which activities are designed to introduce and reinforce knowledge of phonetic symbols and their practical application in speech. These activities combine explicit IPA instruction with participatory exercises, such as sound games, phonetic transcription exercises, phonological dictations, and guided pronunciation practice. This methodology fosters phonological awareness, auditory discrimination, and correct articulation of English sounds.

The sessions are structured progressively to ensure familiarity with, comprehension of, and effective application of the IPA. They start with recognizing individual sounds and progress to using them in words and phrases in real communicative contexts. This approach promotes comprehensive learning that goes beyond theory, focusing on the continuous improvement of pronunciation through the conscious use of phonetic symbols.

In short, this system of phonetic classes with the use of the IPA constitutes a methodological proposal that seeks to significantly improve English pronunciation, providing students with clear and effective tools for learning phonetics as a basis for fluent and accurate oral communication.

3.3 Description of the class system with the use of IPA for the enhancement of phonemes /n/, /ŋ/.

General objective: To improve the pronunciation of the English phonemes /n/, /ŋ/ in General Basic Education students through the implementation of a class system using the IPA.

Specific objectives:

- To identify the phonetic difficulties presented by students in the articulation of the phonemes /n/, /ŋ/.
- To apply didactic activities based on the IPA to develop students' phonological awareness.
- To promote the oral production of words and sentences that include the phonemes worked on.
- To evaluate the students' phonetic progress before and after the pedagogical intervention.

CLASS 1

- Content: Phoneme /n/
- Objective: To identify the point and mode of articulation of the phoneme /n/.
- Resources: IPA phonetic chart, audio of words with /n/, mirror for articulatory observation.
- Activities:
o Visual presentation of the /n/ symbol.
o Repetition of model words: "name", 'nose', "night".
o Exercise in pairs: phonetic dictation.
o Evaluation: Articulation checklist.

CLASS 2

- Content: Phoneme /ŋ/
- Objective: To recognize and produce the phoneme /ŋ/ according to the mode of articulation.

- Resources: explanatory video of the phoneme /ŋ/, comparative audio /n/ vs /ŋ/, cards with minimal pairs.

- Activities:

o Active listening: auditory discrimination of minimal pairs.

o Guided pronunciation exercise with visual support.

o Play activity: "hidden phoneme" (guessing the word with /ŋ/).

o Evaluation: Observation record.

CLASS 3

- Content: Comparison between /n/ and /ŋ/.

- Objective: To distinguish aurally and articulatorily the phonemes /n/ and /ŋ/.

- Resources: audio of minimal pairs, voice recorder, mirror, flashcards.

- Activities:

o Role play: saying sentences with both phonemes.

o Recording of individual oral production and subsequent analysis.

o Guided practice: repetitions and correction in real time.

o Evaluation: Formative feedback with recordings.

CLASS 4

- Content: Communicative application of the phonemes /n/ and /ŋ/.

- Objective: Correct use of the phonemes in oral interactions.

- Resources: Conversation worksheets, role-play activities, keyword cards.

- Activities:

o Board game: "Make a sentence" with words containing /n/ and /ŋ/.

o Simulated dialogues with phonetic correction.

o Final activity: oral mini-presentation with target vocabulary.

CHAPTER IV: ANALYSIS AND DISCUSSION OF RESULTS OF THE IMPLEMENTATION OF THE CLASSROOM SYSTEM WITH THE USE OF IPA.

This chapter presents an analysis and interpretation of results obtained from a classroom system that uses the International Phonetic Alphabet (IPA) to improve pronunciation of English phonemes /n/ and /ŋ/. The objective is to evaluate the effectiveness of the phonetic strategy applied to seventh grade students in the General Basic Education Program "A" at NA school during the 2025-2026 academic year. Diagnostic (pre-test) and final (post-test) evaluations were used to analyze the obtained data and determine if the intervention significantly contributed to the students' phonetic development. Additionally, the impact of the methodology on articulatory awareness, auditory perception, and communicative production of the target phonemes is examined.

4.1 Description of the Application of the Phonetic Class System Using the IPA

The methodological proposal was applied in four face-to-face sessions, held on May 12, 14, 16 and 19, 2025. Seventeen 7th grade parallel "A" students participated, who were previously evaluated by means of a diagnostic test and structured observations. The intervention was based on the use of IPA to work explicitly and consciously on the phonemes /n/ (alveolar nasal) and /n/ and /ŋ/ (velar nasal), through articulatory, auditory and communicative exercises.

Class 1 - Introduction to IPA and phoneme /n/

During the first session on Monday, May 12 from 11:00 A.M to 11:40 A.M, the concept of the International Phonetic Alphabet (IPA) and its usefulness in learning

English, especially for improving pronunciation, was introduced. Subsequently, the study of the phoneme /n/, a voiced alveolar nasal consonant, was addressed. Students participated in visual and auditory activities that included watching demonstration videos, practicing in front of a mirror to observe articulation, and recognizing the point and mode of articulation. Guided repetitions were performed with words such as name, nine, new, and minimal pairs such as net - let and no - go were applied to reinforce phonological discrimination. The main objective was for students to recognize, articulate, and correctly transcribe words with the phoneme /n/.

Class 2 - Production of the phoneme /ŋ/ and differentiation from /n/

In this class on Wednesday, May 14 from 11:00 A.M to 11:40 A.M, we worked on the phoneme /ŋ/, a voiced velar nasal consonant that commonly appears in the -ng ending of many English words. Its articulation was compared with that of the phoneme /n/, emphasizing the differences in the point of articulation: /n/ occurs in the alveoli, whereas /ŋ/ is articulated in the soft palate. Cards with phonetic transcriptions, auditory examples, and paired activities were used where students had to classify words according to the predominant phoneme, as in the minimal pairs sin - sing, ran - rang, ton - tongue. In addition, simple tongue twisters and repetition games were practiced to reinforce auditory discrimination. The objective of this session was for students to differentiate the phonemes /n/ and /ŋ/ and produce them correctly in context.

Class 3 - Comparison and guided practice of /n/ and /ŋ/

The third class was held on Friday, May 16 from 11:00 A.M. to 11:40 A.M. and aimed to reinforce the articulatory and auditory distinction of the phonemes /n/ and /ŋ/. Communicative activities such as role-plays and model sentences containing both phonemes were organized, which allowed us to observe their use in context. Students

recorded their individual oral production using a voice recorder, which was analyzed as a group with teacher support to identify strengths and errors. In addition, a guided repetition practice with immediate correction was included. This session served as a bridge between isolated phonetic work and contextualized language application.

Class 4 - Communicative Application and Final Evaluation

The final session took place on Monday, May 19 from 11:00 A.M. to 11:40 A.M. and focused on the communicative application of the phonemes /n/ and /ŋ/ in real speaking situations. Students participated in dynamic activities such as the board game "Make a sentence", where they had to form sentences using keyword cards containing the phonemes studied. They also carried out conversation simulations using role-play cards, with corrective intervention by the teacher when necessary. Finally, a mini oral presentation was held, where each student used the vocabulary worked on throughout the sessions. The final evaluation was carried out using a phonetic rubric that considered the following indicators: place and mode of articulation, sound functioning, auditory distinction, and communicative intelligibility. This session made it possible to observe the progress achieved and to consolidate learning in a meaningful context.

4.2 Application Results (Post-Test)

During the implementation of the International Phonetic Alphabet (IPA) classroom system, direct classroom observations were conducted in order to record notable behaviours associated with the development of the pronunciation of the phonemes /n/ and /ŋ/ in English. These observations focused on aspects such as oral articulation of the sounds, response to phonetic corrections, participation in oral activities and familiarisation with the phonetic symbols presented.

Overall, a positive and participatory atmosphere was evident. Students showed enthusiasm when interacting with the proposed activities, especially those that included listening dynamics, phonetic games, and transcription exercises. As the sessions progressed, they became more confident in articulating the phonemes being worked on, as well as in better auditory discrimination between /n/ and /ŋ/. The visual resources used, such as phonetic cards and projected IPA symbols, facilitated comprehension and favoured the graphic recognition of sounds.

However, some students tended to substitute the phoneme /ŋ/ for more familiar Spanish sounds, such as /ɲ/, due to linguistic interference. These observations coincide with the results obtained in the post-test, where the auditory dimension showed moderate progress compared to the other dimensions.

To enrich the qualitative analysis, the perception of the English teacher was collected through a structured interview. The teacher, with more than five years of experience in teaching the language, assessed the intervention positively and highlighted significant progress in the three dimensions evaluated: phonetic, phonological and communicative.

In the phonics dimension, the teacher indicated that the students improved significantly in their ability to articulate the phonemes /n/ and /ŋ/, especially when receiving immediate feedback and visual support. She also mentioned that some students started to apply the IPA symbols autonomously when practising pronunciation, which shows internalisation of the resource.

Regarding the phonological dimension, the teacher pointed out that familiarisation with the IPA symbols enabled students to better understand how English

sounds work and how they correspond to writing, thus reducing phonetic-orthographic confusion.

Regarding the auditory dimension, there was progress in the students' ability to discriminate /n/ and /ŋ/ sounds, especially during the auditory recognition activities. However, the teacher pointed out that this aspect requires more practice, as some students were still unsure of how to identify the sounds in new words or in spontaneous communicative situations.

As far as the communicative dimension is concerned, improvements were reported in the clarity of speech during oral activities. The teacher indicated that, although spontaneous use of phonemes in fluent speech still requires reinforcement, students were able to produce words more accurately and were more confident in speaking.

In the open-ended section of the interview, the teacher noted that the auditory discrimination activities and guided reading aloud with IPA support were particularly effective. He also suggested that the inclusion of songs or real dialogues could further strengthen the transfer of phonemes to everyday communicative use.

At the end of the intervention, a post-test was applied on 19 May 2025, with the aim of measuring progress in the pronunciation of the phonemes /n/ and /ŋ/ by the participating students. A total of 17 students from the seventh grade of General Basic Education took part in the evaluation, of which 12 were female and 5 were male. The instrument applied maintained the same assessment criteria used in the pre-test, which allowed direct comparisons to be made. The test included phonetic reading exercises, auditory identification of sounds and controlled oral production.

The results are presented below, organised according to the four dimensions considered in the analysis: phonetic, phonological, auditory and communicative.

Dimension 1: *Phonetic Dimension*

Dimension 1

■ Developed ■ Partially Developed ■ Undeveloped
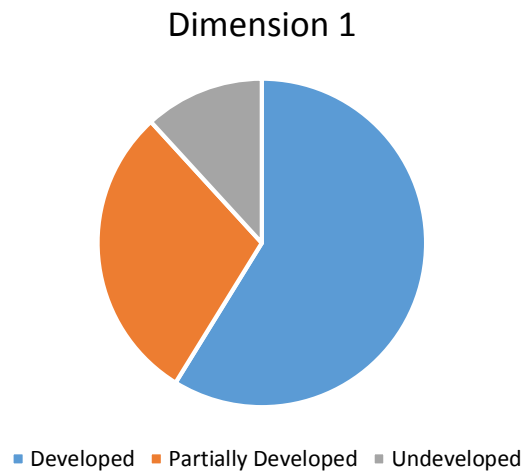
Figure 5: Post-test (Phonetic Dimension)

This indicator showed a notable improvement in the correct articulation of phonemes, especially /ŋ/, due to the use of visual techniques and guided repetition. It is noteworthy that more than half of the group managed to develop this dimension satisfactorily, compared to only one student in the initial diagnosis.

Dimension 2: *Phonological Dimension*

Dimension 2

■ Developed ■ Partially Developed ■ Undeveloped
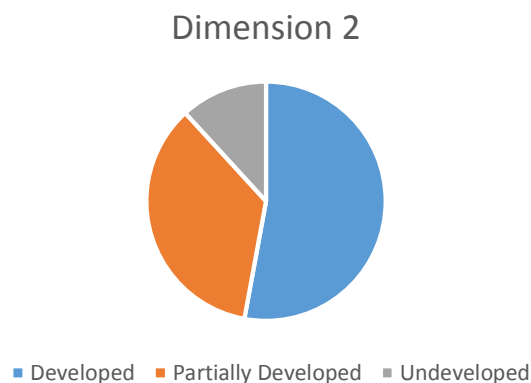
Figure 6: Post-test (Phonological Dimension)

The results show progress in the identification and analysis of phonological rules associated with the target phonemes. The minimal pairs and phonetic classification activities helped to reinforce this skill.

Dimension 3: *Auditory Dimension*

Dimension 3

■ Developed ■ Partially Developed ■ Undeveloped
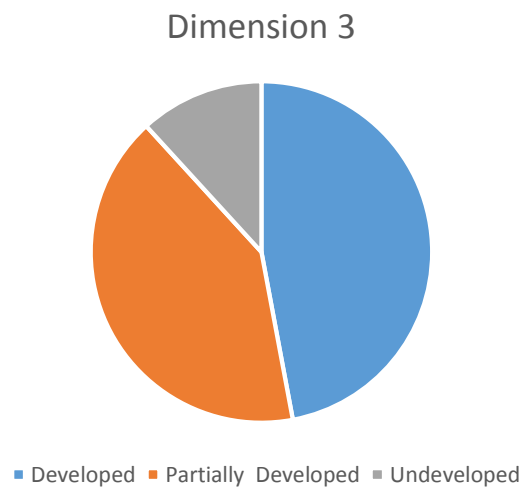
Figure 7: Post-test (Auditory Dimension)

Although the improvement in this dimension was moderate, there was progress in the students' ability to distinguish the phonemes aurally, thanks to repeated listening and contrastive exercises.

Dimension 4: *Communicative Dimension*

Dimension 4

■ Developed ■ Partially Developed ■ Undeveloped
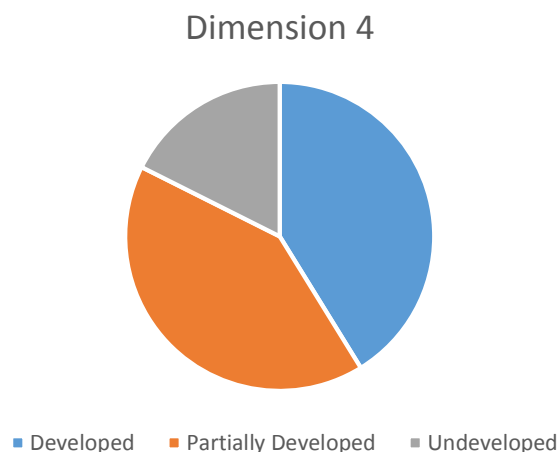
Figure 8: Communicative Dimension

In communicative terms, the pronunciation of phonemes still presents challenges, especially in spontaneous contexts. However, the use of role-plays and phonetic reading allowed a progressive improvement.

General Analysis

Overall, 12 students (71%) reached a level between 'developed' and 'moderately developed' in all the dimensions assessed, which represents a considerable improvement compared to the pretest, where more than 70% of the students were at the 'undeveloped' level. These results lead to the conclusion that the class system with the use of IPA was effective in improving the pronunciation of the phonemes /n/ and /ŋ/. In addition, the students' phonemic awareness, auditory differentiation and oral production were strengthened, in line with the aims and hypothesis of the present research.

4.3 Hypothesis testing

In order to determine whether the implementation of the phonetic class system with the use of the International Phonetic Alphabet (IPA) had a significant effect on the improvement of the pronunciation of the phonemes /n/ and /ŋ/ in English, the paired t-

test was applied. This test is appropriate when one wishes to compare the performance of the same group of students before and after an educational intervention, as in the case of this research.

The quantitative analysis using this test allowed us to establish whether the differences observed between the pre-test and post-test results were statistically significant, to validate or reject the research hypothesis.

Scientific hypothesis:

If a system of classes is implemented with the use of the I.P.A as a didactic resource, then, the pronunciation of the phonemes (/n/, /ŋ/) of English in the students of 7th grade of General Basic Education "A" at the NA school during the academic period 2025-2026 will be improved.

Statistical hypothesis

(H_0): If a class system is implemented with the use of the I.P.A as a didactic resource, no significant improvement will be observed in the pronunciation of the English phonemes /n/ and /ŋ/ in the students.

(H_1): If a classroom system with the use of I.P.A as a didactic resource is implemented, a significant improvement in the pronunciation of the /n/ and /ŋ/ phonemes of English will be observed in the students.

4.3.1 Paired t-Test Analysis (Overall Results)

Table 4: Complete data and differences (Pre-test vs. Post-test)

N°	PRE-TEST (X_1)	POST-TEST (X_2)	DIFFERENCE ($D_i = X_2 - X_1$)
1	9.1	9.7	0.6
2	8.9	8.5	0.1
3	8.3	9.2	0.1
4	8.4	8.4	0.2
5	7.4	8.7	1.3
6	7.4	8.9	1.5
7	6.9	9.7	2.8
8	5.5	8.5	3.0
9	6.5	8.9	2.4
10	6.0	8.8	2.8
11	1.2	6.7	5.5
12	4.7	5.7	1.0
13	4.9	5.6	0.7
14	0.2	.6	7.4
15	4.2	6.6	2.4
16	3.0	3.8	0.8
17	1.9	1.2	0.1

- Shows individual scores before and after the intervention.

- The difference ($X_2 - X_2$) is positive in all cases, indicating improvement in all students.

Table 5: Key statistical calculations

STATISTIC	VALUE
Media Pre-Test	5.61
Media Post-Test	7.54
Media differences (d^-d)	1.92
Standard deviation ($Sd Sd$)	**2.01**
Value t	3.94
Degrees of freedom (df)	16

4.3.2 Analysis by dimensions

Table 6: Phonetic Dimension

PERFORMANCE	PRE-TEST	POST-TEST	EXCHANGE
Developed	1 6%	10 59%	+53%
Partially Developed	3 18%	5 29%	+11%
Undeveloped	13 76%	2 12%	+64%

- Significant improvement in the Developed level from 6% to 59%, indicating that the majority of students achieved strong articulation proficiency after the intervention.

Table 7: Phonological Dimension

PERFORMANCE	PRE-TEST	POST-TEST	EXCHANGE
Developed	4 24%	9 53%	+29%
Partially Developed	5 29%	6 35%	+6%
Undeveloped	8 47%	2 12%	-35 %

Table 8: Auditory Dimension

PERFORMANCE	PRE-TEST	POST-TEST	EXCHANGE
Developed	3 17%	7 41%	+23%
Partially Developed	5 29%	7 41%	+12%
Undeveloped	9 53%	3 18%	-35%

Table 9: Communicative Dimension

PERFORMANCE	PRE-TEST	POST-TEST	EXCHANGE
Developed	4 24%	9 53%	+29%
Partially Developed	5 29%	6 35%	+6%
Undeveloped	8 47%	2 12%	-35%

4.3.3 Comparison by categories (Pre-test vs. Post-test)

Table 10: Mean values per category

CATEGORY	MEDIA PRE-TEST	MEDIA POST-TEST	DIFFERENCE (POST - PRE)	% IMPROVEMENT
Place and manner of articulation	1.29	2.47	+1.18	91.5%
Structure and function of sounds	1.76	2.41	+0.65	36.9%
Perceptual distinction	1.29	2.35	+1.06	82.2%
Intelligibility	1.59	2.24	+0.65	40.9%

- The greatest gains are evident in "Place and manner of articulation" and "Perceptual distinction.

- Although the improvement in "Intelligibility" and "Structure and functioning of sounds" was more moderate, it also reflects positive progress.

4.3.4 Paired t-tests by category

Table 11: Student's t-test

DIMENSION (INDICATOR)	VALUE T	SIGNIFICANCE (P < 0.05)	EFFECT SIZE (D)
Articulation	-6.67	Sí (p = 0.000)	1.6 (big)
Operation	-5.42	Sí (p = 0.000)	1.3 (big)
Perception,	-6.63	Sí (p = 0.000)	1.6 (big)
Intelligibility	-5.42	Sí (p = 0.000)	1.3 (big)

The results obtained by Student's t-test for related samples show statistically significant improvements in the four dimensions evaluated: place and mode of articulation, sound structure and function, perceptual distinction and intelligibility. In all cases, the p-values were less than 0.001, indicating that the probability that these improvements are due to chance is extremely low.

Furthermore, the effect size (Cohen's d) in each dimension was greater than 1.3, which, according to the interpretation criteria established in the literature (Cohen, 1988), corresponds to a "huge" effect. This implies not only that the changes observed were statistically significant, but also that they are practically relevant and notable in terms of educational impact.

Specifically:

Indicators 1 and 3 (articulation and perception) showed the highest effects (d = 1.6), suggesting very strong gains in sound production and recognition.

Indicators 2 and 4 (sound functioning and intelligibility) also showed a large impact (d = 1.3), indicating clear improvements in speech clarity and phonological control.

These findings support the effectiveness of the intervention applied, not only in general terms, but also at the specific level of each phonological dimension assessed.

4.4 Discussion of the results

The main objective of this research was to improve the pronunciation of the phonemes /n/ and /ŋ/ in seventh grade students of General Basic Education, through a class system based on the use of the International Phonetic Alphabet (IPA). To evaluate the effectiveness of the intervention, a pre-test and a post-test were applied focusing on four dimensions: phonetic, phonological, auditory and communicative.

From a statistical point of view, the paired t-test evidenced a significant difference between the results of the pre-test and post-test, with a t-value = 15.61, $p < 0.001$ and 16 degrees of freedom, exceeding the critical value for a significance level of

$\alpha = 0.05$. This allows us to reject the null hypothesis and confirm that the intervention had a positive and statistically significant effect on student performance.

In the phonetic dimension, the students showed a better command of the point and mode of articulation of the phonemes /n/ (alveolar) and /ŋ/ (velar), which resulted in a more accurate pronunciation. This improvement is directly related to the systematic use of IPA, which made it possible to graphically represent the sounds and guide their articulatory production. Haikal (2023) points out that teaching pronunciation using IPA facilitates a more accurate and systematic approach to learning sounds.

In the phonological dimension, the results revealed progress in understanding the functioning of /n/ and /ŋ/ sounds in different linguistic contexts. Students were able to recognize and correctly use the phonemes within words and sentences, evidencing a strengthening of their phonological awareness. Zhang and Yuan (2020) showed that explicit instruction focusing on both segmental and supra-segmental aspects significantly improves comprehensibility in spontaneous production, especially when a supra-segmental approach is adopted for spontaneous speech.

The auditory dimension also showed significant improvements. The learners' ability to aurally discriminate the phonemes /n/ and /ŋ/ increased significantly, which facilitated both listening comprehension and self-correction. Derwing and Munro (2015) note that phonemic training helps learners discriminate subtle differences between sounds, thus improving accuracy in pronunciation

Finally, in the communicative dimension, progress was recorded in the intelligibility of the students' speech. The correct production of phonemes allowed for clearer oral communication, favoring mutual comprehension in real interaction situations. Pennington and Rogerson-Revell (2019) argue that improvement in

pronunciation in an L2 requires modifying both perceptual and production schemas to achieve effective intelligibility.

Taken together, these results support the efficacy of the IPA-based phonetic system as a pedagogical resource for improving English pronunciation in basic-level learners. It is recommended to continue with reinforcement sessions especially aimed at consolidating the auditory dimension and communicative fluency.

CONCLUSIONS

It was evident that the students presented significant problems in articulating correctly the phoneme /ŋ/, which does not exist as an independent phoneme in Spanish. This generated confusion and substitution with similar sounds such as /ɲ/. Poor auditory discrimination and little knowledge of the point and mode of articulation were also observed.

The lesson system allowed the students to become familiar with the phonetic symbols and their associated sounds. Through play, listening and repetition exercises, students improved their phonological awareness and began to use IPA as a resource for self-correction and pronunciation improvement.

Practical activities, such as role-plays and mini-presentations, allowed students to use the phonemes /n/ and /ŋ/ in real contexts. This strengthened their fluency and confidence in speaking English and improved the intelligibility of their spoken messages.

The results of the post-test and paired t-test confirmed statistically significant improvements in all dimensions tested (articulation, functioning, perception and intelligibility). The effect size was 'huge' ($d > 1.3$), which validates the effectiveness of the IPA intervention.

RECOMMENDATIONS

It is recommended to incorporate the analysis of the influence of the mother tongue on the acquisition of English sounds, as this study did not delve into how Spanish phonological interferences affect the articulation of phonemes such as /ŋ/. Understanding these interferences would allow the design of more specific and effective strategies that directly address recurrent errors caused by language transfer, thus favouring a more accurate and natural pronunciation in learners.

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APPENDICES

Appendix 1

PARTICIPANT OBSERVATION GUIDE

Objective: To analyse student and teacher performance in English classes focused on the phonetic development of the phonemes /n/ and /ŋ/.

"NA SCHOOL"

Name of the subject:	English
Group:	7th grade "A"
Authors:	Mayely Cedillo; Nathaly Vicente
Date:	Monday, 12th May, 2025

N°	Indicators	Compliance YES	NO	Observations
1	The teacher explains the articulation of /n/ and /ŋ/ using IPA.		✖	
2	The teacher uses audio-visual resources to demonstrate pronunciation.		✖	
3	The students participate in listening and repeating activities.	✖		
4	The students distinguish between /n/ and /ŋ/ sounds.		✖	
5	The students use IPA symbols in classroom activities.	✖		
6	The class environment supports pronunciation practice.		✖	

Appendix 2

DIAGNOSTIC TEST

Objective: To assess the current pronunciation level of phonemes /n/ and /ŋ/ in 7th-grade students at NA School.

Section A: Multiple Choice Questions

1. Which word contains the phoneme /ŋ/?

  a) run

  b) long

  c) none

  d) tan

2. Which phoneme is found in the word 'sing'?

  a) /n/

  b) /ŋ/

  c) /m/

  d) /l/

3. Select the word that ends with /n/:

  a) bank

  b) gone

  c) pen

  d) bring

4. Which of the following IPA transcriptions corresponds to 'song'?

  a) /sɒn/

  b) /sɔŋ/

  c) /sʌn/

  d) /soʊn/

5. What is the correct place of articulation for /ŋ/?

  a) Alveolar

  b) Bilabial

    c) Velar

    d) Dental

Section B: Pronunciation Practice

6. Read aloud the following words and identify the phoneme: pin, ping, sun, sung.

7. Match the following words to their correct phonemes (/n/ or /ŋ/):

Long

Fan   **/n/**

Bang

Pen   **/ŋ/**

8. Circle the words that contain /ŋ/ in the following sentence:

"The king was running in the morning sun"

9. Listen to your teacher pronounce minimal pairs and mark whether you hear /n/ or /ŋ/:
    e.g., ban/bang, tin/ting.

10. Write three words that contain the phoneme /n/ and three that contain /ŋ/.

Appendix 3

STRUCTURED INTERVIEW FOR THE TEACHER (Before Implementation)

Objective: To understand the teacher's perception of students' pronunciation of /n/ and /ŋ/ before the pedagogical intervention.

1. How do you assess your students' current pronunciation of /n/ and /ŋ/?

    _____

2. What challenges do students face when pronouncing these phonemes?

    _____

3. Are you currently using any phonetic strategies or resources such as IPA?

    _____

4. How familiar are your students with the International Phonetic Alphabet?

    _____

5. What methodologies do you apply to improve pronunciation?

    _____

Appendix 4

POST-TEST

Objective: To evaluate the pronunciation progress of /n/ and /ŋ/ in 7th-grade students after the implementation of the IPA-based class system.

Section A: Multiple Choice Questions

1. Which of the following words has the /n/ sound at the end?

   a) song
   b) fan
   c) long
   d) bank

2. What is the phoneme represented in the word "singing"?

   a) /n/
   b) /ŋ/
   c) /m/
   d) /g/

3. Which word contains the velar nasal sound /ŋ/?

   a) fun
   b) nap
   c) thing
   d) none

4. Choose the correct transcription for the word "running":

   a) /rʌnɪn/
   b) /rʌnɪŋ/
   c) /rænɪŋ/
   d) /rʊnɪn/

5. In which word does the /ŋ/ phoneme appear in the middle position?

   a) mango
   b) wrong
   c) angle
   d) singing

Section B: Application Tasks

6. Repeat the following words after your teacher and identify if they contain /n/ or /ŋ/: pin, sing, pen, bang.

7. Fill in the blanks with words that include /n/ or /ŋ/:
    a) The cat is _____.
    b) I see a _____ in the sky.

8. Colour the words that have /n/ and circle those with /ŋ/:

    "Running in the sun, the king was singing a song".

9. Transcribe the following words into IPA: pen, king.

10. Create two sentences using at least one word with /n/ and one with /ŋ/ in each.

Appendix 5

STRUCTURED INTERVIEW FOR THE TEACHER (After Implementation)

Objective: To gather the teacher's feedback on the effects of the class system using IPA on students' pronunciation of /n/ and /ŋ/.

1. Have you noticed improvements in students' pronunciation of /n/ and /ŋ/?

_____

2. What specific changes have you observed in their articulation?

_____

3. Do students show more confidence when using these phonemes?

_____

4. What impact did the use of IPA have on their learning process?

_____

5. Would you recommend this methodology to other educators? Why or why not?

_____

Appendix 6

<table>
<tr>
<td colspan="3" align="center">
UNIVERSIDAD TÉCNICA DE MACHALA
<i>"Calidad, Pertinencia y Calidez"</i>
D.L. No. 69-04 DE 14 DE ABRIL DE 1969 PROVINCIA DE EL ORO – REPUBLICA DEL ECUADOR
UNIDAD ACADÉMICA DE CIENCIAS SOCIALES
CARRERA DE PEDAGÓGIA DE IDIOMAS NACIONALES Y EXTRANJEROS

Lesson Plan 1: Introduction to Phoneme /n/
</td>
</tr>
<tr>
<td>School: "NA School"</td>
<td>Subject: English</td>
<td>Course: 7th "A"</td>
</tr>
<tr>
<td>Teachers: Mayely Cedillo; Nathaly Vicente</td>
<td>Date: Monday, 12th May, 2025</td>
<td>Time: 40 minutes</td>
</tr>
<tr>
<td colspan="3">Theme: Introduction to Phoneme /n/</td>
</tr>
<tr>
<td colspan="3">Objective: Students will identify and articulate the phoneme /n/ using the International Phonetic Alphabet (IPA).</td>
</tr>
</table>

Time	Contents/Activities	Resources	Evaluation
10 minutes	**Warm-up:** • Students will brainstorm words that contain the /n/ sound. **Development:**	• Pencils • Pens • Board • Marker • Cards	80% of students will correctly identify and pronounce the phoneme /n/ in given words.

25 minutes	• The teacher introduces the IPA symbol /n/, explaining its articulation point and manner. • Students repeat model words (e.g., name, nose, night) and complete a matching exercise. • In pairs, students practice short sentences using /n/ words. **Conclusion:**	• Worksheet	
5 minutes	• Checklist of correct pronunciation and symbol recognition.		

Appendix 7

	UNIVERSIDAD TÉCNICA DE MACHALA *"Calidad, Pertinencia y Calidez"* D.L. No. 69-04 DE 14 DE ABRIL DE 1969 PROVINCIA DE EL ORO – REPUBLICA DEL ECUADOR **UNIDAD ACADÉMICA DE CIENCIAS SOCIALES** **CARRERA DE PEDAGÓGIA DE IDIOMAS NACIONALES Y EXTRANJEROS** **Lesson Plan 2: Introduction to Phoneme /ŋ/**	

School: "NA School"	Subject: English	Course: 7th "A"
Teachers: Mayely Cedillo; Nathaly Vicente	**Date:** Wednesday, 14th May, 2025	**Time:** 40 minutes
Theme: Introduction to Phoneme /ŋ/		
Objective: Students will identify and articulate the phoneme /ŋ/ using IPA and differentiate it from /n/.		

Time	Contents/Activities	Resources	Evaluation
10 minutes	**Warm-up:** • Students watch a short video showing articulation of /ŋ/. **Development:**	• Pencils • Pens • Board • Marker • Cards • Worksheet	Students will accurately distinguish /ŋ/ from /n/ in at least 4 out of 5 minimal pair activities.

| 25 minutes | • The teacher presents minimal pairs (e.g., sin/sing, ban/bang) using visual aids.

• Students repeat words and use mirrors to observe their mouth movements.

• Group reading of a short paragraph containing /ŋ/ words.

Conclusion: | • Mirror | |
| 5 minutes | • IPA transcription activity and oral performance checklist. | | |

Appendix 8

	UNIVERSIDAD TÉCNICA DE MACHALA *"Calidad, Pertinencia y Calidez"* D.L. No. 69-04 DE 14 DE ABRIL DE 1969 PROVINCIA DE EL ORO – REPUBLICA DEL ECUADOR **UNIDAD ACADÉMICA DE CIENCIAS SOCIALES** **CARRERA DE PEDAGÓGIA DE IDIOMAS NACIONALES Y EXTRANJEROS** **Lesson Plan 3: Contrasting /n/ and /ŋ/**	

School: "NA School"	**Subject:** English	**Course:** 7th "A"
Teachers: Mayely Cedillo; Nathaly Vicente	**Date:** Friday, 16th May, 2025	**Time:** 40 minutes
Theme: Contrasting /n/ and /ŋ/		
Objective: Students will distinguish between /n/ and /ŋ/ in listening and speaking activities.		

Time	Contents/Activities	Resources	Evaluation
10 minutes	**Warm-up:** • Listening game where students identify the phoneme in spoken words. **Development:**	• Pencils • Pens • Board • Marker • Cards	Most students (at least 80%) will correctly categorize words based on whether they contain /n/ or /ŋ/.

25 minutes	• Comparison chart between /n/ and /ŋ/ (place/manner of articulation). • Matching activity and sentence completion using both phonemes. • Pairs practice short dialogues containing both sounds. **Conclusion:** • Peer feedback and teacher rubric on pronunciation clarity.	• Worksheet	
5 minutes			

Appendix 9

<table>
<tr><td colspan="3" align="center">**UNIVERSIDAD TÉCNICA DE MACHALA**
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UNIDAD ACADÉMICA DE CIENCIAS SOCIALES
CARRERA DE PEDAGÓGIA DE IDIOMAS NACIONALES Y EXTRANJEROS

Lesson Plan 4: Integrating /n/ and /ŋ/ in Communication</td></tr>
<tr><td>**School: "NA School"**</td><td>**Subject:** English</td><td>**Course:** 7th "A"</td></tr>
<tr><td>**Teachers:** Mayely Cedillo; Nathaly Vicente</td><td>**Date:** Monday, 19th May, 2025</td><td>**Time:** 40 minutes</td></tr>
<tr><td colspan="3">**Theme:** Integrating /n/ and /ŋ/ in Communication</td></tr>
<tr><td colspan="3">**Objective:** Students will use /n/ and /ŋ/ in meaningful spoken contexts.</td></tr>
</table>

Time	Contents/Activities	Resources	Evaluation
10 minutes	**Warm-up:** • Tongue twisters involving /n/ and /ŋ/. **Development:**	• Pencils • Pens • Board • Marker • Cards	Students will use at least one word with /n/ and one with /ŋ/ correctly in a short oral presentation or sentence.

25 minutes	• Review of IPA symbols and pronunciation rules. • Role-play conversations using target phonemes. • Oral presentations incorporating key vocabulary. **Conclusion:** • Performance rubric assessing intelligibility, accuracy, and fluency.	• Worksheet	
5 minutes			

Appendix 10

Photo 1: *Closing group photo*

Appendix 11

Photo 2: *Students interacting in class*

Appendix 12

Photo 3: *Applying the teacher interview (Before Implementation)*

Appendix 13

Photo 4*: Practical activity on English sounds*

Appendix 14

Photo 5*: Students participating at the blackboard.*

Appendix 15

Photo 6: *Students taking the pre-test.*

Appendix 16

Photo 7*: Students taking notes from class*

Appendix 17

Photo 8: *Applying the teacher interview (After Implementation)*

Appendix 18

Photo 9: *Class development during the intervention*